Conditions and If statements

- Python supports the usual logical conditions from mathematics:
  - Equals: a == b
  - Not Equals: a != b
  - Less than: a < b
  - Less than or equal to: a <= b
  - Greater than: a > b
  - Greater than or equal to: a >= b

```
a = 1
b = 2
a == b
a != b
a < b
a > b
a <= b
a >= b
```

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Conditions and If statements

- An if statement is written using the **if** keyword.
- **Important:** Python relies on **indentation** (whitespace at the beginning of a line) to define the scope in the code.
- The **elif** keyword is Pythons way of saying, if the previous conditions are not true, then try this condition:

```
x = 200
y = 33
if x > y:
  print("x is greater than y")
```

```
x = 33
y = 33
if y > x:
  print("y is greater than x")
elif x == y:
  print("x and y are equal")
```

Indentation

- Indentation refers to the spaces at the beginning of a code line.
- Python uses indentation to indicate a block of code.
- The number of spaces is up to you, but use the same number of spaces in the same block of code

Indentation

Indentation

```
x = 33
y = 33
if y > x:
  print("y is greater than x")
elif x == y:
  print("x and y are equal")
```

If statements – Try it out

```
[13]  a = 100
      b = 35
      c = 501
      if a > b and c > a:
        print("Both conditions are True")
```

```
a = 100
b = 35
c = 501
if a > b or a > c:
  print("At least one of the conditions is True")
```

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